

RAINBOW BEACH

INFRASTRUCTURE SERVICES



Luke & Company Pty Ltd

June 2010

INFRASTRUCTURE SERVICES

Prepared for:

Part 3A Concept Plan – Rainbow Beach (MP 06_0085)

Part 3A Project Application – Rainbow Beach (MP 07_0001)

Part Lot 1232 DP 1142133, Lot 5 DP 25886 and

Lots 1,2,3 & 4 DP 1150758

Rainbow Beach, BONNY HILLS

Prepared by Luke & Company Pty Ltd

For and on Behalf of St Vincent's Foundation Pty Ltd

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1. Scope of Document

1.1 Scope of Document

This document is relevant to two applications pursuant to Part 3A of the Environmental Planning and Assessment Act 1979 as follows:

MP 06_0085	Rainbow Beach Concept Plan
MP 07_001	Open Space Corridor and Constructed Wetland, Rainbow Beach

1.2 Scope of Part 3A Applications

The Concept Plan application seeks consent for:

- The delineation of the limits of the residential subdivision;
- The location of the three adopted intersections with Ocean Drive;
- The location of an additional intersection with Ocean Drive currently under investigation by Council;
- The delineation of the future school sites;
- The delineation of the Greater Lake Cathie/Bonny Hills Village Centre;
- The delineation of the eco-tourist development site; and
- The delineation of the Open Space, Drainage and Wildlife Habitat Corridor.

The Project Application will seek consent for the following elements:

- Open space, drainage and wildlife habitat corridors;
- Earthworks required for constructed wetlands and to create filled reclaimed areas;
- Stormwater treatment and management; and
- District Sporting Fields.

Consent for the Project Application and the completion of the associated physical works therein, will advance the project to the point where:

- urban and residential development areas are reclaimed to inundation free levels and are appropriately protected and vegetated;
- the open space, habitat and drainage corridor areas of the site are rehabilitated with typical indigenous coastal habitats appropriate to the location and incorporating passive recreational facilities (eg pathways, cycleways, park seating, children's playgrounds and picnic areas);
- the District Sporting Fields are filled, vegetated and readied for transfer to Port Macquarie-Hastings Council.

Urban and residential development consistent with the Concept Plan will then be completed in a series of stages, each of which will be the subject of future applications.

1.3 Director General's Requirements addressed

The Director has issued Director General's Requirements (DGRs) for the Concept Plan (CP) Application and the Project Application (PA).

The following Concept Plan Application DGR is addressed in this report:

"CP 6.1 Address existing capacity and requirements of the development for sewerage, water, electricity, telecommunications, waste disposal and gas in consultation with relevant agencies. In particular, demonstrate the ability of the sewerage treatment plant at Bonny Hills to accommodate the proposed development."

No Project Application DGRs are required to be addressed by this report.

2. Background

The subject land is located at Rainbow Beach, approximately 18km south of Port Macquarie and is identified as Part Lot 1232 DP 1142133, Lots 1, 2, 3 & 4 DP 1150758 and Lot 5 DP 25886. The subject land is situated between the coastal villages of Lake Cathie to the north and Bonny Hills to the south. The land is used primarily for agricultural activities such as cattle grazing and contains two dwellings and associated farm sheds.

Port Macquarie-Hastings Council adopted a Structure Plan in July 2004 to facilitate residential development in the Lake Cathie / Bonny Hills area to cater for the growing demand for urban land. The area is identified as Area 14 and includes land identified for future residential, commercial and light industrial development. The subject land is already zoned residential, however forms part of Area 14 and requires statutory certainty with respect to the adopted Area 14 Structure Plan.

The Structure Plan identified the location of the proposed residential precincts, village centre, community facilities, schools, playing fields and the major road network to service development within Area 14. The structure plan identified and adopted three intersections along Ocean Drive. The Concept Plan proposed by the applicant is in accordance with the Structure Plan.

Port Macquarie – Hastings Council is the authority responsible for the provision of sewerage, water supply, recycled sewerage effluent and waste disposal services. The land proposed for development is well placed with regard to provision of infrastructure services. A sewerage treatment plant, water supply mains, electricity supply and telecommunications facilities are located either within the subject land or are within close proximity to the property.

The adopted Area 14 Integrated Water Cycle Management Plan requires the use of recycled water from the Bonny Hills Sewerage Treatment Plant (STP). The STP has been upgraded by Port Macquarie – Hastings Council and was opened on 17 May 2010 by the Minister for Local Government, The Hon Barbara Perry MP. The capacity of the STP has subsequently increased from 6,000 EP to 9,000 EP with the ultimate capacity being 12,000 EP. The local Council had also imposed a moratorium on development whilst waiting for the upgrade to be completed, however this has now been lifted and there is no restriction on development proposals for urban zoned land.

Country Energy is the authority responsible for provision of electricity supply and Telstra is responsible for the provision of telecommunications services. Reticulation of gas supply to individual properties is not currently available in the area and is not proposed at this point in time.

3. Bonny Hills STP

There has been a moratorium on additional development in the Bonny Hills and Lake Cathie area for some time due to the Bonny Hills STP being at capacity. This restriction was removed on 26 May 2010 at an Ordinary Meeting of Port Macquarie – Hastings Council, following the completion of the STP upgrade works.

Port Macquarie – Hastings Council initiated a program of works to increase the capacity of the STP from 6,000EP to 12,000EP.

Port Macquarie – Hastings Council has provided an update on all servicing provisions as at June 2010, and this correspondence is included in the Appendices section of this report.

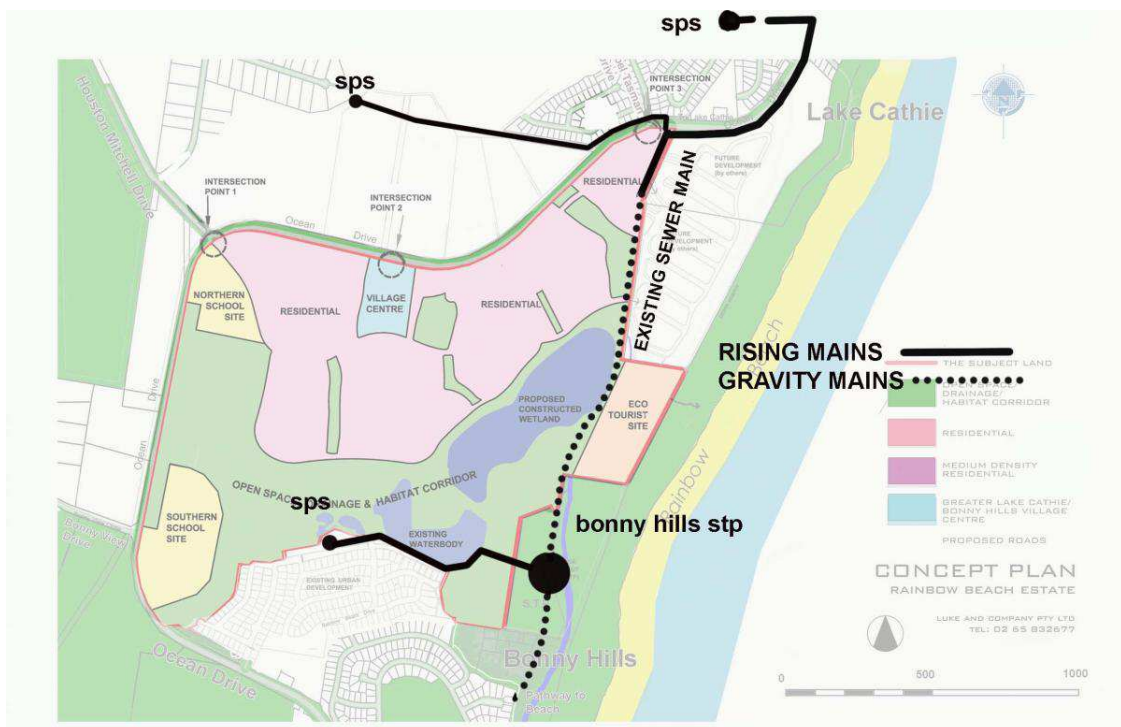
4. Sewerage

4.1 Existing Sewerage Network

Sewerage of properties in the Lake Cathie/Bonny Hills district is currently provided by a system of gravity mains, pumping stations (sps) and rising mains that collect sewage from individual allotments and deliver it to the Bonny Hills STP. A 375mm trunk gravity main currently traverses the eastern side of the subject land and carries all flows from Lake Cathie Village south to the Bonny Hills STP.

Port Macquarie – Hastings Council has advised that this trunk main will remain in place but is unable to carry any additional sewage loads that will be generated by the proposed development and other developments in the Lake Cathie/Bonny Hills area. Figure 1 shows the current Sewerage Network in the locality.

Figure 1: Current Sewerage Network



4.2 Proposed Sewerage Strategy

4.2.1 Works Proposed by PMHC

Port Macquarie – Hastings Council’s strategy for provision of sewerage to serve the subject land is summarized as follows (refer also Figure 2):

- Increase the capacity of the Bonny Hills STP via augmentation works which were commissioned in May 2010. This has increased the capacity of the STP from the previous 6,000EP to the upgraded capacity of 12,000EP.
- Construction of a new sewer pumping station (SPS) within the subject land which is to be fully funded by development.
- Install a new rising main to service the proposed development.
- Port Macquarie – Hastings Council has advised that the existing trunk main is unable to carry additional loads and accordingly will remain in place servicing existing residential areas.
- Refer also to Appendix 3, Port Macquarie – Hastings Council’s letter dated 22 June 2010, regarding Area 14 Sewerage Service Provision.

4.2.2 Works by the Developer

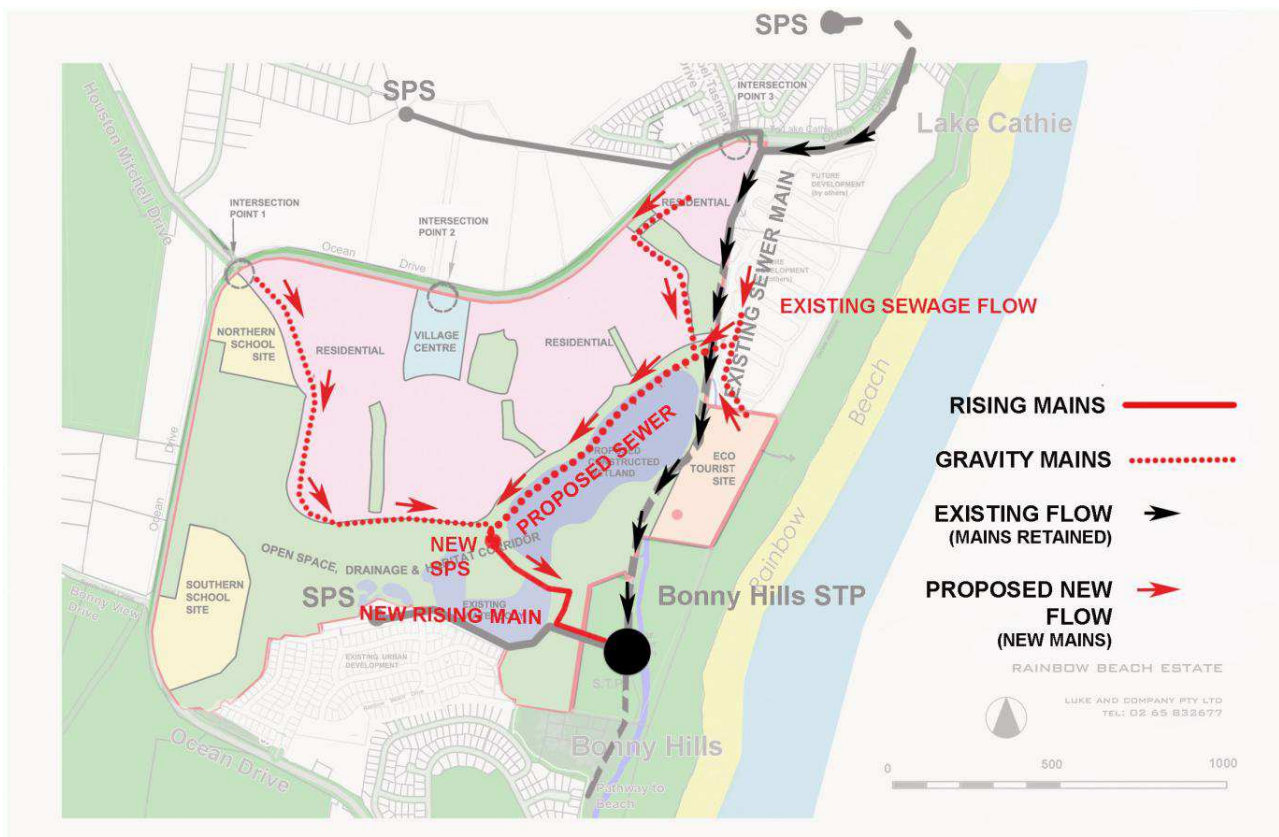
Reticulation mains to service individual allotments are provided by the developer at full cost to the developer. The design of these works will be undertaken at the Construction Certificate stage for each of the individual stages of the development and will be the subject of future applications.

4.3 Funding of Sewerage Works

The proposed major sewer pump station, the rising main and the diversion of the existing trunk gravity main, will benefit the development of the subject land and possibly other developments proposed for Area 14. Where appropriate a new District Servicing Plan (DSP) will be prepared to apportion the costs on an equitable basis. Port Macquarie – Hastings Council is proceeding towards a DSP review to be completed at some stage in the future.

Reticulation mains, up to and including 150mm diameter and those mains wholly within and benefitting one development, are provided by the developer at their cost.

Figure 2: Proposed Sewerage Network



5. Water Supply

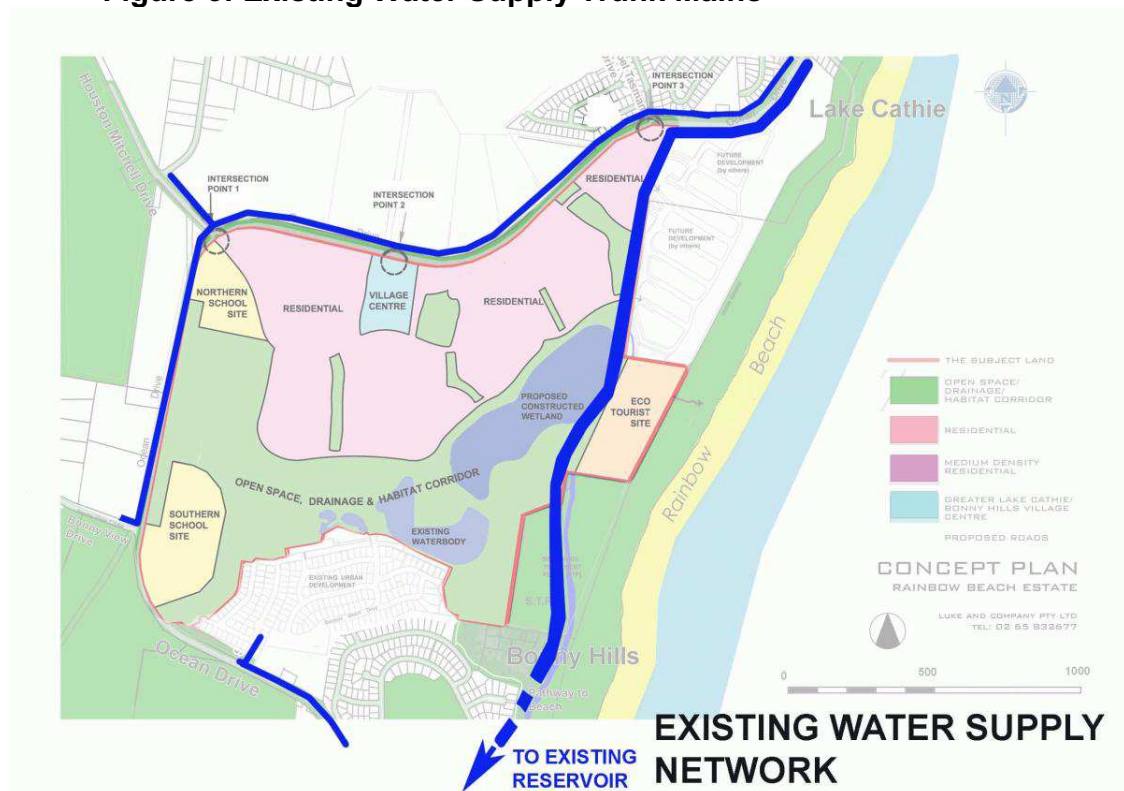
5.1 Existing Water Supply Trunk Main

The proposed development site is traversed by an existing 450mm water supply trunk main that extends generally along the eastern side of the subject land. Port Macquarie – Hastings Council has advised that this trunk main can only be directly utilised to provide water for any Area 14 developments in the short to medium term.

Future supply for the subject land and other Area 14 developments is currently being supplemented by a new main funded by a 10 year interest free loan of \$7.959 million.

The existing water supply trunk mains are shown in Figure 3.

Figure 3: Existing Water Supply Trunk Mains



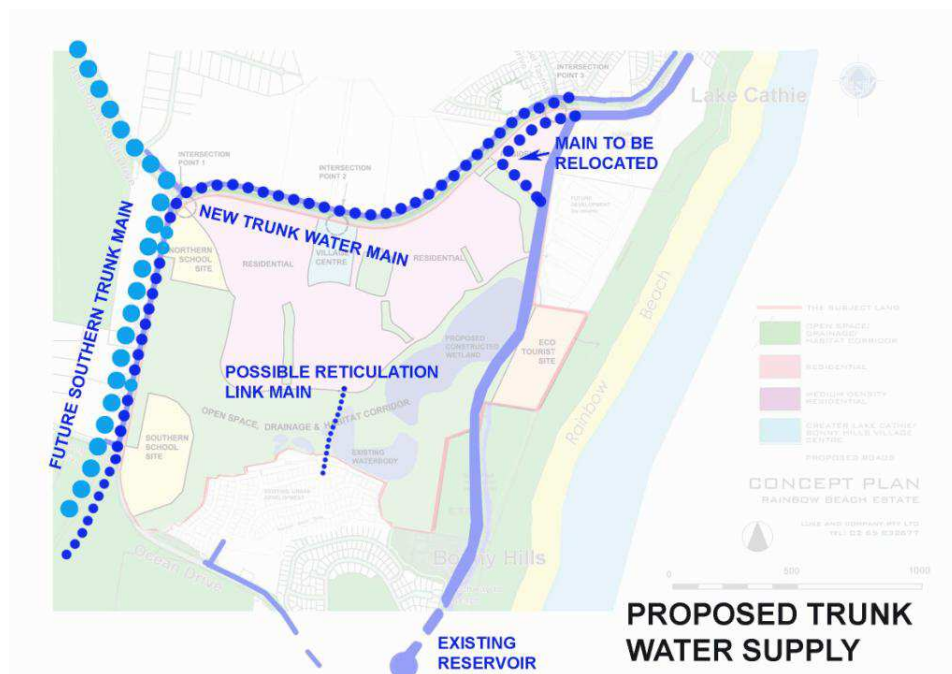
5.2 Proposed Trunk Water Supply Network

Consultation with PMHC has determined the conceptual design for ultimate trunk water supply mains as shown in Figure 4. As an interim measure, water for 400ET's may be supplied from a connection to the existing trunk main that traverses the site. Port Macquarie – Hastings Council has also advised that water for 100ET is available directly opposite the subject land.

In addition, Port Macquarie – Hastings Council has work on augmenting the long term water supply for Area 14. Work has commenced and will be completed by end June 2011. This is confirmed in Council's correspondence dated 22 June 2010 included in the Appendices section of this report.

The developer will provide all internal reticulation mains up to 150mm diameter that are wholly within and only benefitting the subject land, at their cost.

Figure 4: Proposed Trunk Water Supply



5.3 Funding of Proposed Water Supply

The Hastings Water District Services Plan (DSP) adopted by PMHC in July 2006 provides for funding of water supply trunk mains. (Refer to the Appendices section of this report).

The DSP includes works to service the proposed Area 14 developments, including the subject land.

The DSP will need to be reviewed to account for the precise location of residential areas that may affect the size and location of water supply mains.

PMHC advised in its letter of June 2010 (included in the Appendices section of this report) that the DSP will be reviewed. This is to reflect the developments that will occur on the land within Area 14 in accordance with Council's adopted Area 14 Structure Plan.

Development contributions will be used to repay the interest free loan accepted by Council at the Port Macquarie – Hastings Council's Ordinary meeting of 24 March 2010.

6. Recycled Water

6.1 Proposed Recycled Water Trunk Mains

There is currently no recycled water system in Lake Cathie or Bonny Hills.

The Integrated Water Cycle Management Plan (Refer to the Appendices section of this report) developed by Port Macquarie – Hastings Council for Area 14 proposes that a recycled treated effluent reticulation system be installed for all subdivision developments.

PMHC has advised, as part of the proposed augmentation works for the Bonny Hills STP, the effluent will be treated to a standard suitable for reuse.

Consultation with Port Macquarie – Hastings Council has determined the likely route for the infrastructure to deliver the treated effluent to the subject land, which is shown in Figure 5.

Within the subject land, reticulation mains and services (up to 150mm) will be provided to each property by the developer at full cost to the developer.

The completion of the STP augmentation and the imminent completion of the recycled water mains, will allow the provision of recycled water as development occurs.

Figure 5: Proposed Recycled Water Trunk Mains



6.2 Funding Of Recycled Water Mains

The cost of providing the infrastructure for delivery of recycled effluent to the development will be included in a Development Servicing Plan that is yet to be prepared by Port Macquarie – Hastings Council. The DSP will provide for a contribution to the cost of works for each lot to be paid by the developer at the time of subdivision. Refer correspondence from Port Macquarie – Hastings Council dated June 2010 and included in the Appendices section of this report.

7. Electricity

7.1 Existing Electricity Supply Network

Country Energy is the authority that provides electrical services to the Port Macquarie-Hastings Local Government Area.

Electricity supply to Lake Cathie Village and Area 14 is currently provided by a zone substation located on Ocean Drive on the southern side of the Lake Cathie Village.

A high voltage overhead power supply line currently traverses the eastern side of the subject land.

High voltage overhead lines are also located along the Ocean Drive frontage of the property.

Figure 6: Existing Electricity Supply Network



7.2 Proposed Development Requirements

Country Energy has advised that high and low voltage reticulation will be provided to service any residential development of the subject land, on the condition of a contribution by the developer.

In addition, it should be noted that:-

- Within the Mid North Coast Regional Strategy (refer extracts in Appendix 6) it is noted that:
 - Transmission: Kempsey – Port Macquarie 132kV Line works are identified;
- Country Energy's 2005-2006 Electricity Network Performance Report notes that (refer Appendix 7, page 38 of extracts) x-arm and insulator replacement in heavily salt affected areas reduced significant outages in the Bonny Hills and Lake Cathie areas.

In brief, there is no impediment to development due to lack of electrical supply and existing supply is being appropriately maintained and augmented as required.

8. Telecommunications

8.1 Existing Telecommunications Infrastructure

Telstra currently has a sub-exchange located on the subject land on Ocean Drive, south of Lake Cathie. Telecommunications cables extend from that sub-exchange along Ocean Drive for the length of the property.

Figure 7: Current Telecommunications Network



8.2 Proposed Development Requirements

Telstra policy is to extend the existing copper telecommunications network to all new residential developments at no cost, other than a connection fee at the time of individual dwelling construction.

There are no impediments to the implementation of the Telstra Policy within the subject land.

8.3 Advanced Telecommunications Services

Telstra will require a contribution by the developer to provide any advanced telecommunications services. This provides telephone, high speed internet and pay TV services through one connection instead of extending the copper network. The proposal requires a contribution by the developer and a number of options are being considered.

9. Waste Disposal

9.1 Existing Waste Disposal Services

PMHC currently provides a kerbside waste pickup service for urban areas of the Port Macquarie-Hastings Local Government Area. This includes the villages of Lake Cathie and Bonny Hills, as well as areas inbetween.

9.2 Proposed Development Requirements

PMHC has advised that the kerbside pickup service will be extended to all properties within the Area 14 Urban Release Area, including future developments on the subject land.

10. Gas

10.1 Existing Gas Infrastructure

Reticulated gas services to individual properties are not currently available anywhere in the Port Macquarie-Hastings Local Government Area.

10.2 Proposed Development Requirements

The owner has requested proposals from gas suppliers on the possible reticulation on LPG throughout the subject land. A typical proposal from Wesfarmers Kleenheat Gas is attached in Appendix 8. These discussions will continue, however, no decision has been made with respect to the provision of reticulated gas supply.

11. Conclusion

In conclusion Concept Plan DGR 6.1 states *“Address existing capacity and requirements of the development for sewerage, water, electricity, telecommunications, waste disposal and gas in consultation with relevant agencies. In particular, demonstrate the ability of the sewerage treatment plant at Bonny Hills to accommodate the proposed development.”*

Accordingly it is noted that -

- Bonny Hills STP has been upgraded to 12,000EP.
- Port Macquarie – Hastings Council has removed the moratorium on development (which was previously based on STP constraints) in May 2010.
- Augmentation of the potable water supply is currently underway and will be completed by June 2011.
- Installation of the future Reclaimed Effluent supply has been designed and will be completed adjacent to the subject land in the near future.
- Installation of future telecoms infrastructure is immediately possible with the exchange TEJDE 30453400 being located within the subject land.
- Installation of future electricity infrastructure is immediately possible, particularly having regard to the close location of the Lake Cathie Zone Substation.
- Port Macquarie – Hastings Council will extend waste services to all new developments in the Area 14 Urban Release Area, which includes the subject land.
- Installation of a reticulated gas system is physically possible, however, no decision has been taken in that regard.

Therefore, there are no impediments to the development proceeding due to inadequate infrastructure or the provision of services.